

Treatment Tip Provides Radiofrequency Option

With new smaller electrode, RF device significantly reduced eyelid hooding and tightened eyelid skin.

BY DIANA MAHONEY
New England Bureau

BOSTON — Monopolar radiofrequency energy delivered to the eyelids through a shallow treatment tip is an effective non-invasive option for rejuvenating both upper and lower eyelid skin, Dr. Brian S. Biesman said at the annual meeting of the American Society for Laser Medicine and Surgery.

In a multicenter clinical trial, Dr. Biesman, who is in private practice in Nashville, Tenn., and his colleagues evaluated the efficacy of the ThermoCool radiofrequency system from Thermage outfitted with the newly designed shallow tip for tightening the eyelid skin of 72 patients ranging in age from 23 to 58 years.

Of the 72 patients treated at four medical centers, 64 underwent treatment of both upper and lower eyelids, 7 underwent upper eyelid treatment only, and 1 underwent only lower eyelid treatment. All of the patients were evaluated at 1 hour, 1 month, 2 months, 4 months, and 6 months after treatment.

Based on physician assessment at the 6-month follow up, significant reductions in both upper eyelid hooding and skin tightening were noted in, respectively, 86% and 88% of the patients who underwent the procedure. The

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physicians reported lower eyelid tightening in 83% of the patients who had the procedure done.

In terms of adverse events, two patients at one center sustained burns that resolved without problem, and there were no ocular injuries.

The key to the "impressive results after only one treatment," said Dr. Biesman, was the shallow tip delivery device that he and his colleagues previously tested in a series of animal and experimental models.

The standard Thermage treatment tip is 1 cm by 1 cm. "The center heating zone [with that tip] is too far beneath the skin's surface to be safely used on the thin skin of an eyelid," Dr. Biesman noted.

The new shallow tip, at 0.5 cm by 0.5 cm, is a quarter of the size of the standard tip, which results in a treatment area of 0.25 cm². With capacitive coupled radiofrequency energy, the larger the electrode being used, the deeper the energy delivery.

"By using a smaller electrode, the treatment is done more superficially," he said. "In the eyelid area, this means impacting the dermis without injuring the epidermis or the eyelid muscle."

The results of this trial suggest that the ThermoCool TC device with the shallow treatment tip is a viable option for eyelid tightening.

"The obvious benefits are that the procedure is quick, painless, and requires no anesthesia or downtime," Dr. Biesman commented.

Dr. Biesman reported receiving consulting fees, a research grant, and honoraria from Thermage. ■

Small Anesthetic Changes Can Have Big Impact on Blepharoplasty Results

BY KERRI WACHTER
Senior Writer

ORLANDO — The difference between acceptable and unacceptable results for a blepharoplasty can be as little as a millimeter, so small improvements in anesthetic control and precision can have a large effect, Dr. Marc Cohen said at the annual meeting of the American Academy of Cosmetic Surgery.

"A tolerance of 1 mm or less is a very high standard to live up to," said Dr. Cohen, a cosmetic surgeon at Wills Eye Hospital in Philadelphia. "The simple truth is that you cannot make the type of intraoperative decisions that give you that type of precision unless the surgery at each step is performed under tremendous control."

Dr. Cohen offered tips that can make a big difference in results when it comes to maintaining patient comfort and giving the anesthetic block. "Every surgery has a weakest link in terms of surgical control. ... Interestingly, the weakest links that I've found—in terms of bleeding and bruising—tend to be the least technically difficult parts of the surgery," he said.

Keeping the patient comfortable during surgery

can have the biggest impact on the quality of the end results. Patient pain and anxiety cause bleeding. The anesthesiologists that he works with understand that he wants patients as sedate as is medically safe throughout the entire procedure.

There are several tricks that can be used to perform a block without bruising. "All of us have had a case where we've given a block and developed a big bruise. The rest of the operation is more difficult," Dr. Cohen said.

He uses Xylocaine (lidocaine) with epinephrine and hyaluronidase injected in the smallest possible needle (32 gauge). The needle is injected at one site laterally. The injection should be superficial to avoid the highly vascular orbicularis.

"Once the needle is in place, it's not moved and a 2- to 3-cc bolus injection is given," Dr. Cohen explained. Remove the needle and massage the bolus immediately.

A transconjunctival block poses more of a bruising problem because the conjunctiva is highly vascular. Dr. Cohen's trick is to constrict the blood vessels before giving the block by using a drop of 2.5% phenylephrine.

There are, however, patients for whom it just is not prudent to have heavy sedation. "You're at a significant disadvantage with these people because they are much more likely to bleed and bruise during surgery," said Dr. Cohen. This is especially true for performing a block. "We go to great lengths to ensure that the block is painless so there is no bruising."

For these patients, Dr. Cohen uses a syringe device called the Wand (Milestone Scientific), which has a microprocessor. The microprocessor controls the rate of flow so there is a constant pressure that is below the pain threshold. When using this device, Dr. Cohen uses the same technique as for a standard block. He reported no conflict of interest with the device. ■



The needle is not moved during the injection of a 2- to 3-cc bolus. After the needle is removed, the bolus is massaged immediately.

COURTESY DR. MARC COHEN

Flashlamp Demonstrates Hair Removal Versatility

BY DIANA MAHONEY
New England Bureau

BOSTON — The ability to shift wavelength emissions "on the fly" makes infrared flashlamp technology a safe and effective option for hair removal in all skin types, Dr. E. Victor Ross said at the annual meeting of the American Society for Laser Medicine and Surgery.

In a study of 63 patients ranging in age from 16 to 50 years with Fitzpatrick skin types I-VI, laser hair removal with the Cutera ProWave 770 cooled sapphire infrared flashlamp handpiece resulted in a mean hair reduction 2 months after the final treatment of 35%-67%, depending on skin type, said Dr. Ross of the Naval Medical Center in San Diego, who authored the study with Dr. Min-Wei Christine Lee of Walnut Creek, Calif.

Study participants underwent hair removal treatment without anesthesia in the bikini area, axillae, lower legs, upper lip, and/or chin, with the axillae and facial regions being the most commonly treated zones.

Hair thickness ranged from medium to coarse across all skin types and hair color ranged from light brown in skin types I and II to brown, dark brown, and/or black in all skin types.

Depending on hair type and amount, patients underwent one to four treatments at 4-week intervals.

A touch screen interface on the flashlamp handpiece enabled clinicians to automatically select the most appropriate treatment mode, which corresponds to different current densities, based on skin type.

"The ability to control spectral emissions in this way enables rapid and precise parameter titration for specific hair and skin types," Dr. Ross said. "The objective is to optimize treatment to destroy the hair follicle while sparing surrounding tissue."

Treatment efficacy was evaluated by global assessment of hair counts from photographs taken immediately before each treatment session and 2 months following the final treatment. For skin types I and II, the mean hair reduction 2 months after the final treatment was 67%, compared with 55% for skin types III and IV and 35% for skin types V and VI.

In terms of side effects, "there was some mild crusting, mostly in darker skin types, that resolved quickly," Dr. Ross said.

The ability to optimize wavelength ranges to specific skin types enables "a nice balance between safety and efficacy," and produces results similar to those seen with Nd:YAG lasers or with very long pulse 810-nm diode lasers, he added.

Dr. Ross reported receiving equipment and research support from Cutera. ■